
Air traffic management's first software defined network (SDN) proves operational success in Brazil

Brazil enhances network capability, reliability and efficiency with Frequentis powering the world's first SDN for ATM

The Brazilian Air Navigation Service Provider (ANSP), DECEA, has been successfully operating the first of four planned integrated network centres, CINDACTA III, for five months. CINDACTA III underwent a lengthy test period and CISCEA (the Commission for Implementation of the Brazilian Air Space Control System) collected positive feedback from the operational experience.

Frequentis designed the hybrid Brazilian ATM-grade network solution to fill the gap between conventional networks and the specific needs for Air Traffic Management (ATM) in terms of resilience, reliability, safety and quality. The design and transition activities for the modernisation programme began in 2014 and the teams from both Frequentis and DECEA have worked continuously to achieve the expected positive results. By successfully taking CINDACTA III into live operation, CISCEA has taken the ATN-Brazil project to the next level.

At the unveiling ceremony for the first site, Major-Brigadier Fernando, president of CISCEA, praised the proactivity of the CINDACTA III project from start to finish, stating: "We could not have chosen a better place to start this ATN-Br project. We thank the current and former teams, especially the technical division, that worked towards this implementation, as well as the operators and companies, Frequentis in particular, and all those directly involved in the planning. We are very proud to be part of this project."

DECEA, is responsible for twenty-two million square kilometres of airspace, about twice the size of Europe, which is split between multiple network providers. One of the telecoms infrastructure challenges to overcome was unstable QoS (Quality of Service) and the detection of degradation in network performance, known as "brownouts" within the network to allow detection before failure.

"Most conventional networks only react to total link loss, known as black-outs," says Hannu Juurakko, Frequentis Chairman of the Air Traffic Management Executive Team. "However, the Frequentis vitalsphere™ NetBroker ensures the business continuity and performance required of an ATM-grade network through brown-out detection, flow-based routing, and bandwidth optimisation. We are extremely pleased to have created this hybrid network to support the needs of DECEA and with it create the world's first SDN for ATM."

ATM-specific virtual network functions (VNFs) enable high-quality communication in this network which features both terrestrial and VSAT links. A tailored nationwide management system (NMS) allows central monitoring, simulation and configuration of the network and thus helps reduce downtimes and increase situational awareness.

“Brazil can be proud of its innovation power with the deployment of a world-class ATM Network. This infrastructure addresses the future needs of the Brazilian Airspace in terms of capacity, safety and efficiency. With an excellent partnership between CISCEA and Frequentis, we have overcome challenges and complexities of a program with a wide range of technologies and stakeholders.”, concludes Gonzalo Moreno-Muñoz, Frequentis Program Manager and Director ATM networks.

About FREQUENTIS

Frequentis, headquartered in Vienna, is an international supplier of communication and information systems for control centres with safety-critical tasks. Such 'control centre solutions' are developed and marketed by Frequentis in the business sectors Air Traffic Management (civil and military air traffic control, air defence) and Public Safety & Transport (the police, fire brigade, ambulance services, shipping, railways). As a global player, Frequentis operates a worldwide network of branches, subsidiaries and local representatives in more than 50 countries. Products and solutions from Frequentis can be found in over 30,000 operator working positions and in approximately 140 countries. Founded in 1947, Frequentis considers itself to be the global market leader in voice communication systems for air traffic control with a market share of around 30%. In addition, the Frequentis Group's AIM (aeronautical information management) and AMHS (aeronautical message handling) systems, as well as GSM-R systems for Public Transport are industry leading global solutions.

The shares of Frequentis AG are traded on the Vienna and Frankfurt Stock Exchange under the ticker symbol FQT (ISIN: ATFREQUENT09).

For more information, please visit www.frequentis.com

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